

REMARKS

This application has been carefully reviewed in light of the Office Action mailed May 13, 2003. In order to advance the prosecution of this application, Applicants have responded to each issue raised by the Examiner. Applicants respectfully request reconsideration, further examination, and favorable action in this case.

Applicants respectfully thank the Examiner for the courtesy of the telephone conference on June 17, 2003, to discuss the claims. As discussed during the telephone conference, an example of a "frequency set" may be found in the Applicants' Specification. (*Specification, Page 10, Lines 10-11*). Examples of a "channel" may also be found in the Applicants' Specification. (*Specification, Page 6, Lines 27-30; Page 10, Lines 7-8*). Applicants respectfully request that the claims be "given their broadest reasonable interpretation consistent with the specification." M.P.E.P. §2111; *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).

The Examiner rejects Claims 1-22 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,848,095 to Deutsch et al. ("*Deutsch*") and "A Spectrum Efficient Technique for Cordless Telephone Access to ISDN" by Kashorda et al. ("*Kashorda*"). Applicants respectfully traverse this rejection for the reasons discussed below.

Amended Claim 1 recites a system for minimizing the loss of information in cordless communications, which includes:

a first data station having control logic, the control logic operable to:
establish a plurality of individual communication channels needed to transmit information between the first data station and a second data station, each of the channels associated with a unique channel frequency; select a first unique channel frequency to be used for the first channel between the two data stations; access a plurality of frequency sets, each frequency of a frequency set corresponding to a channel; remove any poor quality frequency set from the plurality of frequency sets; determine parameters relating to a spectral separation between each of the channels, the spectral separation describing a separation between a pair of unique channel frequencies associated with the channels; and select unique channel frequencies for the remainder of the plurality of channels in response to the determined

parameters by selecting a frequency from each frequency set, each pair of unique channel frequencies having a spectral separation; and
response logic residing in the second data station, the response logic operable to receive the information from the first data station on the plurality of communication channels.

Deutsch discloses a frequency hopping communications system that adaptively reallocates channel usage based on a fixed assigned time slot. (*Col. 1, Lines 22-25*). The system selects channels according to a table that is established in the memory of the system at the time of manufacture. (*Col. 6, Lines 15-19*). The table includes groups, where each group includes a series of frequencies, for example, a Group B includes frequencies B1, B2, ... B50. (*FIGURE 5*). According to *Deutsch*, a base unit and a remote unit of the system scan a pre-selected group of channels, for example, Group A, and attempts to get in a lock mode. (*Col. 5, Lines 59-65*). Once the system achieves a lock, the system switches to another group of channels, for example, Group B. (*Col. 5, Lines 65-67*). If the channels of Group B are functioning properly, then the base unit and the remote unit will hop from B1 to B2 to B3, etc. to B50 and the cycle back to B1, B2, etc. (*Col. 6, Lines 1-4*). If a channel, for example, B3, is not functioning properly, the system will switch to a frequency of another group, for example, frequency C3 of Group C, resulting in a sequence B1, B2, C3, B4, B5, etc. (*Col. 6, Lines 5-9*).

The table of *Deutsch* is generated by grouping the channel frequencies of a frequency range into a number of subbands. (*Col. 6, Lines 47-55*). For each group, a random sequence of subbands is created. (*Col. 6, Lines 56-62*). A distinct channel frequency is selected from each subband of the random sequence of subbands in order to generate a sequence of channel frequencies for each group. (*Col. 6, Lines 63-67*).

Deutsch teaches generating a table from all subbands of a frequency range, establishing the table in the system at the time of manufacture, and selecting frequencies according to the table. Moreover, if a channel is not functioning properly, *Deutsch* teaches selecting a corresponding frequency from another group, instead of removing poor quality subbands. Accordingly, *Deutsch*, even in light of *Kashorda*, does not disclose, teach, or

suggest removing "any poor quality frequency set from the plurality of frequency sets," as recited in Claim 1. For at least these reasons, Claim 1 is patentable over the cited references.

Applicants' dependent claims are allowable based on their dependence on the independent claim and further because they recite numerous additional patentable distinctions over the cited references. For example, *Deutsch* does not disclose, teach, or suggest modeling "interference encountered over individual channels between the data stations," and selecting "parameters that minimize the loss of information over each of the individual channels," as recited in Claim 6, where the parameters relate to "a spectral separation between each of the channels," as recited in Claim 1. *Deutsch* teaches using a received signal strength indicator and signals indicating channel quality to determine whether to use a higher power frequency hopping transmission. (*Col. 5, Lines 45-51*). *Deutsch*, however, does not disclose, teach, or suggest modeling "interference encountered over individual channels between the data stations," and selecting "parameters that minimize the loss of information over each of the channels," as recited in Claim 6.

Because Applicants believe they have amply demonstrated the allowability of the independent claims over the prior art, and to avoid burdening the record, Applicants have not provided additional detailed remarks concerning the dependent claims. Applicants, however, remain ready to provide such remarks if it becomes appropriate to do so.

For at least these reasons, Claim 1-6 are patentable over the cited references. Applicants respectfully request withdrawal of the rejection and full allowance of Claim 1, and Claims 2-6 depending from Claim 1.

Claim 7 recites "accessing a plurality of frequency sets," where each frequency of a frequency set corresponds to a channel, and removing "any poor quality frequency set from the plurality of frequency sets."

Claim 10 recites "modeling interference over one of the channels," and "selecting parameters that minimize the loss of information over the plurality of channels."

Claim 15 recites "accessing a plurality of frequency sets," where each frequency of a frequency set corresponds to a channel, and removing "any poor quality frequency set from the plurality of frequency sets."

Claim 21 recites accessing "frequency sets," where each frequency of a frequency set corresponds to a channel, and removing "any poor quality frequency set from the plurality of frequency sets."

Claim 22 recites accessing "frequency sets," where each frequency of a frequency set corresponds to a channel, and removing "any poor quality frequency set from the plurality of frequency sets."

As described above, *Deutsch* fails to disclose, teach, or suggest removing "any poor quality frequency set from the plurality of frequency sets." Moreover, *Deutsch* does not disclose, teach, or suggest modeling "interference encountered over individual channels between the data stations," and selecting "parameters that minimize the loss of information over each of the individual channels," where the parameters relate to "a spectral separation between each of the channels."

For at least these reasons, Applicants respectfully request withdrawal of the rejection of and full allowance of Claims 7, 15, and 21-22, Claims 8-14 depending from Claim 7, and Claims 16-20 depending from Claim 15.

CONCLUSION

For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request reconsideration and full allowance of all pending claims.

If the Examiner feels that a telephone conference or an interview would advance prosecution of this application in any manner, the undersigned attorney for Applicants stands ready to conduct such a conference at the convenience of the Examiner.

Applicants do not believe that any fees are due. However, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 19-2179 of Siemens Corporation.

Date: July 13, 2003

Respectfully requested,

SIEMENS CORPORATION
Intellectual Property Department
170 Wood Avenue South
Iselin, New Jersey 08830
ATTENTION: Elsa Keller, IP Department
Telephone: (732) 321-3026

By: Thomas George
Thomas George
Registration No. 45,740
Attorney for Applicants
Tel: 650-694-5191
Fax: 650-968-4517